## Remarks and Arguments

Claims 1-33 have been presented for examination. Claims 1, 8, 16 and 31 have been amended.

Claims 1-15 were rejected under 35 U.S.C. §101 as being drawn to subject matter that is not within the "technological arts." In response, claims 1 and 8 have been amended to specify that the recited method is being performed by a computer. For example, amended claim 1 recites "A method for use in a computer having a processor and a memory for generating recommendations for consumer preference items, comprising ... controlling the processor to apply the profile sample item information as an input to a recommendation database in the memory ... controlling the processor to select consumer preference items that are located in the database within a predetermined distance from the profile sample items and to present the selected consumer preference items to the customer as a recommendation." It is thus clear that non-trivial steps in the method are being performed by a computer using a database within the memory of that computer. Similarly, amended claim 8 recites "... displaying the recommended items to the customer under control of the processor." Amended claim 8 also recites that a non-trivial step in the method is being performed by a computer. Therefore, claims 1 and 8 are clearly directed to subject matter that forms part of the "technological arts." Claims 2-7 and 9-15 are dependent on amended claim 1 and are therefore also directed to subject within the "technological arts."

Claims 1-10, 14, 16-25, 29 and 31-33 have been rejected under 35 U.S.C. §102(e) as anticipated by U.S. Patent No. 6,249,785 (Paepke.) The examiner asserts that the Paepke patent discloses all of the claimed limitations.

The present invention uses a database of consumer preference items, such as songs, movies or television shows to generate recommendations. The database is created from consumer preference tests in which a large number of respondents comparatively rate a large number of items. The database contains calculated distances between each pair of items based on the respondent preference ratings. In order to make recommendations from the database, a profile procedure based on inputs from a customer generates sample items. These sample items are then applied as inputs to the database and items in the database within a predetermined distance from

the profile sample items are recommended to the customer. Thus, the inventive system is suitable in an environment that contains many items that the user has not reviewed and may not even be aware of. Such an environment may, for example, be a music recommendation system in which there are hundreds of thousands of songs of which a given user may have knowledge of only a small number.

The Paepke patent discloses a book recommendation system which generates predicted book ratings based on similarities of pairs of books irrespective of the actual ratings of the books. The predictions are generated by converting the ratings into rankings using a table of values and then using the rankings to generate the predictions. See, for example, the Paepke, abstract. More specifically, the rating system is based on "links" between books. Links are calculated by accumulating ratings of books in a set of books by a plurality of readers. Each pair of books rated by the same reader is then ranked by selecting a coefficient from a table based on the ratings assigned to each book as described in Paepke, column 3, lines 48-52. The ranking results for several readers are illustrated in Figures 3-6. The rankings for all readers are then combined and filtered to arrive at "links" between books as illustrated in Paepke Figure 10.

Paepke describes three methods for using these links. In the first method, as described at Paepke column 6, line 19-column 7, line 9, a reader selects an unread book and asks the system to predict a rating that the reader would have given the book had he read the book. As set forth in Paepke, this prediction is accomplished by examining the ratings of at least two other books that the reader has read and that are linked to the unread book (Paepke, column 5, lines 35-62.) This method differs from that recited in the claims. For example, claim 1 recites (in lines 4-5) "identifying a plurality of profile sample items based on selections made by a customer" and (in lines 11-15) "controlling the processor to select consumer preference items that are located in the database within a predetermined distance from the profile sample items and to present the selected consumer preference items to the customer as a recommendation." Thus, the present system recommends additional items (which may or may not be known to the customer) based on samples chosen based on information provided by the customer. Paepke generates a rating for an item already selected by

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the customer. Therefore, the customer must already know which book that he wants rated.

The second method disclosed in Paepke (column 8, lines 14-62) is based on the first method. Here all of the book ratings are computed for each reader and each book by an off-line computation process. See, Paepke column 8, lines 14-17. In this method a reader asks for a given number of books with the highest ratings. Additional information may be entered to restrict the search to relevant categories. Again, the ratings are based on linked books. This Paepke method differs from that claimed in, for example, claim 1 in that no samples are provided by reader on which the predictions are based. Thus, this Paepke method does not disclose a mechanism for "generating information identifying a plurality of profile sample items based on selections made by a customer" ... and "controlling the processor to apply the profile sample item information as an input to a recommendation database..." in order to generate the recommendations.

The third Paepke method is disclosed at Paepke column 8, line 62 – column 9, line 58. In this method a reader rates several books. The Paepke system then generates a number of recommendations from these samples by finding all books that are linked to the samples. In particular, the system first calculates and stores a table of linked books as shown in Figure 20. Each sample submitted by the reader is then used to select books linked to that sample. The linked books are presented as recommendations. This Paepke system differs from that recited in claim 1 in that it does not have "a recommendation database in the memory, the database storing information identifying a plurality of preference items and distances between each pair of items, the distances being calculated from preference ratings obtained from a consumer preference test; and does not have a mechanism for "controlling the processor to select consumer preference items that are located in the database within a predetermined distance from the profile sample items..." as recited in claim 1.

Therefore claim 1 recites a combination of steps which combination is not taught in the Paepke patent and patentably distinguishes thereover. Claims 2-10 and 14 are dependent, either directly or indirectly, on amended claim 1 and incorporate the limitations thereof. Therefore they distinguish over the cited reference in the same

manner as amended claim 1. In addition, these claims also recite other limitations not taught by the cited reference. For example, claim 6 recites that the distance between ratings is determined by calculating the difference in preference ratings between the pair of preference items for each respondent and combining the preference rating differences for all respondents. The examiner points to Paepke column 4, lines 19-37 and Figures 3-6 as disclosing this. However, this section of Paepke discloses that each cell in the tables contains a coefficient taken from the table in Figure 2. For example, in Figure 3, the content of the cell at the intersection of row K and column A is -.2. The notation (9-6) only indicates that the two ratings involved are a "9" and a "6" and does not indicate a difference between the ratings. See Paepke, column 4, lines 24-29. Thus, claim 6 patentably distinguishes over the cited reference.

Similarly, claim 9 recites that the sample items are based on selections made by a customer and items recommended by the recommendation system. The examiner asserts that this is disclosed in Paepke at column 8, lines 54-61. However, in this section, Paepke discloses that, after receiving the top highest rated books as recommendations, a reader can rate any of the recommendations he has subsequently read and re-calculate the ratings. Paepke does not disclose using the recommendations as samples on which to base further recommendations. Indeed, this Paepke method only recommends the highest rated books and does not accept any sample inputs from the reader in order to make this recommendation. Therefore, claim 9 also patentably distinguishes over the cited reference.
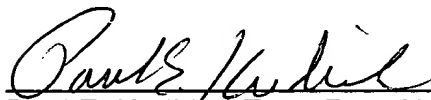
Claims 16 and 31 have been amended in the same manner as amended claim 1. Therefore, they also patentably distinguish over the cited reference in the same manner as amended claim 1. Claims 17-25 and 29 are dependent, either directly or indirectly, on amended claim 16 and incorporate the limitations thereof. Therefore they distinguish over the cited reference in the same manner as amended claim 16. In addition, these claims also recite other limitations not taught by the cited reference. For example, claims 21 and 24 contain limitations that parallel those in claims 6 and 9 and distinguish over the reference in the same manner as those claims. Similarly, claims 32-33 are dependent, either directly or indirectly, on amended claim 31 and incorporate the limitations thereof. Therefore they distinguish over the cited reference in the same

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manner as amended claim 31. In addition, these claims also recite other limitations not taught by the cited reference. For example, claim 33 contains limitations that parallel those in claim 6 and distinguishes over the reference in the same manner as that claim.

Claims 11-13, 15, 26-28 and 30 have been rejected under 35 U.S.C. §103(a) as obvious in view of Paepke. Claims 11-13 and 15 are dependent, either directly or indirectly, on amended claim 16 and incorporate the limitations thereof. Therefore, they distinguish over the cited reference in the same manner as amended claim 16. Claims 26-28 and 30 are dependent, either directly or indirectly, on amended claim 31 and incorporate the limitations thereof. Therefore they distinguish over the cited reference in the same manner as amended claim 31.

In light of the forgoing amendments and remarks, this application is now believed in condition for allowance and a notice of allowance is earnestly solicited. If the examiner has any further questions regarding this amendment, he is invited to call applicants' attorney at the number listed below. The examiner is hereby authorized to charge any fees or direct any payment under 37 C.F.R. §§1.17, 1.16 to Deposit Account number 02-3038.

Respectfully submitted

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